REMARKS

Claims 1, 4-10, 16-17, 19-20, 23-26, 31-35, 39-41, and 71-72 are currently pending in the above-referenced application. Claim 6 has been amended and is supported by paragraph 39 of the instant specification. Claims 1, 10, 17, 35, 40, 71 and 72 have also been amended in order to further identify the claimed invention. These claim amendments are supported throughout the instant specification. *See, e.g.*, paragraphs 28 and 29. The amendment in claim 40 is also supported by paragraph 42 of the instant specification. Claims 2-3, 11-15, 18, 21-22, 27-30, 36-38, and 42-70 have been cancelled. Applicant reserves the right to prosecute the subject matter of the cancelled claims in one or more continuation or continuation-in-part applications.

Applicant respectfully acknowledges the time taken by the Examiner for the interview of November 4, 2009. Applicant wishes to thank the Examiner. The amendments and remarks contained hereinbelow reflect the discussions of this interview. Applicant respectfully submits that pursuant to these discussions, the claims are now in condition for allowance. Reconsideration and withdrawal of the pending rejections is respectfully requested.

Response To Rejection Under 35 U.S.C. § 112, ¶1

Claims 1, 4-10, 16, 17, 19, 20, 23, 24, 35, 39-41, 71, and 72 have been rejected under 35 U.S.C. § 112, ¶1 as failing to comply with the written description requirement as allegedly not providing adequate support for "an inhibitory agent." Applicants respectfully disagree with this rejection. However, to expedite the prosecution of this application, applicants have amended claims 1, 10, 17, 35, 40, and

71 in order to address the Examiner's concern. These amendments are supported throughout the instant specification.

Pursuant to the recommendations of the Examiner and Supervisory Examiner Yvonne Eyler, applicants have defined the term "agent" in the specification as an "cytotoxic or cytostatic agent". Cytotoxic and cytostatic agents are intracellular inhibitors that inhibit and/or destroy macrophages and/or monocytes. The specification describes cytotoxic and cytostatic agents in paragraphs 28 and 29. MPEP 2111.01, Section IV, states that "[a]n applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s)." (citing *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994)). Cytotoxic/cytostatic agents are well recognized in the art and have well understood meaning. The specification provides ample description of representative examples of such agents so that one of skill in the art recognizes the meets and bounds of the invention as claimed. The claims are directed to formulations of the claimed size range containing cytotoxic/cytostatic agent for treatment of acute myocardial infarction as described throughout the specification.

The specification contains several examples of preferred agents for the claimed formulation. For example bisphosphonates may be used as the agent in the claimed formulation and is supported by paragraphs 28-34, figures 1-3, and example 1 (paragraphs 46-50). Two chemical structures of bisphosphonates for the claimed formulation are provided to exemplify this embodiment, as shown in paragraphs 31 (bisphosphonate) and 32 (alendronate) of the instant specification. Additionally, the

specification also sets forth other acceptable agents for use in the claimed formulation. Paragraph 29 of the instant specification describes further representative members of the class of cytotoxic or cytostatic agents to include, for example, gold, selenium, gadolinium, silica, mithramycin, paclitaxel, sirolimus, and everolimus. The specification demonstrates use of the instant invention using alendronate, a bisphosphonate. However, one skilled in the art could readily recognize the equal applicability of other members of the cytotoxic/cytostatic class of agents to the claimed invention, because the skilled artisan reading the specification understands that the formulation functions to treat acute myocardial infarction by targeting the formulation to phagocytic cells and inhibiting their activity. With this teaching, the skilled person readily recognizes that any cytotoxic/cytostatic agent can be used to fulfill the objectives of the claimed invention. The specification provides ample description to guide the skilled artisan to this understanding. (*See, e.g.*, paragraphs 10-13, 19-20, 24-34, 47-50.)

Reconsideration and withdrawal of this rejection under 35 U.S.C. § 112, ¶1 is respectfully requested.

Response To Rejection Under 35 U.S.C. § 103(a)

Claims 1, 4-10, 16, 17, 19, 20, 23-26, 31-35, 39-41, 71, and 72 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Pennanen et al. ("Effect of Liposomal and Free Bisphosphonates on the IL-1β, IL-6, and TNF-α Secretion from RAW 264 Cells In Vitro," *Pharmaceutical Research*, Vol. 12, No. 6, pp. 916-922, 1995) and Hack, et al. (U.S. Patent No. 6,090,777) in view of Ylitalo ("Bisphosphonates and

Atherosclerosis," *Gen. Pharmacology*, Vol. 35, pp. 287-296, 2002) and Hope, et al. (U.S. Patent No. 6,139,871). Applicants respectfully disagree with this rejection.

As discussed during the interview, the combination of Pennanen, Hack, Ylitalo and Hope would not lead one of skill in the art to the claimed invention. None of Pennanen, Ylitalo or Hope teach or suggest a treatment for an acute myocardial infarction. Each of these references describes or suggests a treatment for a long-term chronic condition; in the case of Pennanen, a "chronic inflammatory disease", and in Ylitalo and Hope, atherosclerosis. Applicants respectfully submit that Hack would not be combined with the teachings of these references because it is directed to an invention to inhibit *the activation of the complement system*, which occurs in the course of acute myocardial infarction. (*See* column 4, lines 59-62 (emphasis added).) One skilled in the art would not combine Pennanen, Ylitalo or Hope with the Hack reference because it is understood in the art that liposomes *activate* the complement system, as evidenced by the attached article by Szebeni. (*See* Janos Szebeni, "The Interaction of Liposomes with the Complement System," *Critical Reviews in Therapeutic Drug Carrier Systems*, 15(1):57-88 (1998).)

The Szebeni article (a copy of which is filed with this response) describes the well-known phenomenon wherein liposomes can activate the complement system. (*See* abstract.) As the article states, "[l]iposomes are recognized by the C[omplement] system as foreign and they trigger C activation." (*See* p. 58.) Hack teaches a treatment of AMI by inhibition of the complement system. In contrast, liposomes are known in the art as activators of the complement system according to Szebeni. Therefore, one skilled in the art would not combine the teachings of the Hack reference with Pennanen,

Ylitalo and/or Hope which all describe the use of liposomes for delivery of drugs. Indeed, Hack teaches away from using liposomes to treat AMI because liposomes activate the complement system.

Further, as discussed previously, the Pennanen, Ylitalo and Hope references describe treatments for chronic diseases. Pennanen suggests that "chronic inflammatory diseases" may benefit from bisphosphonate liposomes. Ylitalo and Hope describe methods of treating atherosclerosis. None of these references teach or suggest a method of treating a patient having an acute myocardial infarction, as recited in the instant claims. Applicants maintain that the physical events that occur during an acute myocardial infarction are completely different from those occuring during atherosclerosis. Ylitalo, Hope, and Pennanen describe the use of bisphosphonates to treat chronic progressive diseases which are different from acute diseases in etiology and treatment regimes. While chronic diseases require treatments that must be tolerated over long periods of time, acute disease conditions require quick and sometimes extreme treatments. One skilled in the art would not look to treatments for long term progressive diseases for treatments of acute situations. This is yet another reason that one skilled in the art would not combine Hack with the other references.

For these reasons, applicants respectfully request that the Examiner withdraw this § 103(a) rejection of Claims 1, 4-10, 16, 17, 19, 20, 23-26, 31-35, 39-41, 71, and 72.

Double Patenting Rejection

The Examiner has provisionally rejected the pending claims on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 10/871,488. The Examiner has also provisionally rejected the pending claims on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-10, 17-20, 23, 24, 27-29, 32-36, 38 and 41 of copending Application No. 11/190,787. These rejections are believed to be premature because no patent has yet issued from the co-pending applications 10/871,488 and 11/190,787. Reconsideration and withdrawal of these rejections are respectfully requested.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the pending claims are in condition of allowance. Favorable reconsideration and allowance of Claims 1, 4-10, 16-17, 19-20, 23-26, 31-35, 39-41, and 71-72 is respectively requested.

If any issues remain, or if the Examiner has any suggestions for expediting allowance of the application, the Examiner is invited to contact the undersigned attorney.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **50-4387**, Order No. 92114.005US1.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **50-4387**, Order No. 92114.005US1.

Respectfully submitted,

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Dated: November 10, 2009 By:

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